

| 7.1 Chemical Analysis Report Verification Record Form

Report Identification: _____		
Data Validation Guidelines/Procedures Used: _____		
Requester: _____ Date: _____		
Required Verification Report Items		
<input type="radio"/> Chain-of-Custody	<input type="radio"/> Applicable Limits List	<input type="radio"/> Analysis Data Report

To be completed by the reviewer

Reviewer: _____	
Yes	No
<input type="radio"/> <input type="radio"/>	1. Is the Chain-of-Custody, Applicable Limits Listing, Analysis Data Report complete?
<input type="radio"/> <input type="radio"/>	2. Were all of the analyses requested completed?
<input type="radio"/> <input type="radio"/>	3. Is there a signature by a Laboratory official on the Analysis Data report which verifies that data validation has been completed by analysis laboratory?
<input type="radio"/> <input type="radio"/>	4. If technical judgments are present in the Analysis Data report are they acceptable based on the reviewer's professional judgment?
<input type="radio"/> <input type="radio"/>	5. Are questions 1 to 4 all Yes? If No, refer this package to the ES&H Chemist to continue the review at step 9.
<input type="radio"/> <input type="radio"/>	6. Does a regulatory or program limit apply to this analysis? If No, check N/A in step 7 and continue to step 8.
<input type="radio"/> <input type="radio"/>	7. If answer to question 6 is "YES" is the data below the regulatory or program limit or within the acceptable range? If the data is above the acceptable limit or outside the acceptable range, refer this report package to the Program Lead to continue the review at step 11.
<input type="radio"/> N/A	
<input type="radio"/> <input type="radio"/>	8. Is the above review complete? If Yes, sign and date this form in step 12 and return this report package to the requester. If No, refer this package to the ES&H Chemist to continue the review at step 9.

9. Summary of action to be completed by ES&H Chemist (or their designee) when required

Yes No

☐ ☐

10. Is the above review and report package acceptable? If Yes, sign and date this form in step 12 and return this report package to the requester. If No, refer this report package to the Program Lead to continue the review at step 12.

11. Summary of action to be completed by Funtional Area Lead (or designee) when required

12. Signature: _____ Date: _____

Return the report package to the requester



alpha

Alpha Analytical Laboratories Inc.

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Central Valley: 9090 Union Park Way, Suite 113, Elk Grove, CA 95624 • Phone: (916) 686-5190 • Fax: (916) 686-5192

06 December 2017

ELAP Certificates 1551, 2728, and 2922

Sandia National Laboratories

John Chavarria

Accounts Payable MS1385 / PO Box 5800

Albuquerque, NM 87185

RE: ST - Storm Water Samples

Work Order: 17K1718

Enclosed are the results of analyses for samples received by the laboratory on 11/16/17 23:28. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jeanette L. Poplin For Sheri L. Speaks

Project Manager

In the California Industrial General Permit (IGP) 2014-0057-DWQ for storm water monitoring, effective July 1, 2015, there are 21 contaminants that have been assigned NAL (Numeric Action Level) values, both annual and instantaneous.

For annual NALs, an exceedance occurs when the average of all analytical results from all samples taken at a facility during a reporting year for a given parameter exceeds an annual NAL value listed in Table 2 of the General Permit. For instantaneous maximum NALs, an exceedance occurs when two or more analytical results from samples taken for any parameter within a reporting year exceed the instantaneous maximum NAL value (for TSS and O&G), or are outside of the instantaneous maximum NAL range (for pH) listed in Table 2. Table 2 is attached here for your review.



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TABLE 2: Parameter NAL Values, Test Methods, and Reporting Units

PARAMETER	TEST METHOD	REPORTING UNITS	ANNUAL NAL	INSTANTANEOUS MAXIMUM NAL
pH*	See Section XI.C.2	pH units	N/A	Less than 6.0 Greater than 9.0
Suspended Solids (TSS)*, Total	SM 2540-D	mg/L	100	400
Oil & Grease (O&G)*, Total	EPA 1664A	mg/L	15	25
Zinc, Total (H)	EPA 200.8	mg/L	0.26**	
Copper, Total (H)	EPA 200.8	mg/L	0.0332**	
Cyanide, Total	SM 4500-CN C, D, or E	mg/L	0.022	
Lead, Total (H)	EPA 200.8	mg/L	0.262**	
Chemical Oxygen Demand (COD)	SM 5220C	mg/L	120	
Aluminum, Total	EPA 200.8	mg/L	0.75	
Iron, Total	EPA 200.7	mg/L	1.0	
Nitrate + Nitrite Nitrogen	SM 4500-NO3- E	mg/L as N	0.68	
Total Phosphorus	SM 4500-P B+E	mg/L as P	2.0	
Ammonia (as N)	SM 4500-NH3 B+ C or E	mg/L	2.14	
Magnesium, total	EPA 200.7	mg/L	0.064	
Arsenic, Total (c)	EPA 200.8	mg/L	0.15	
Cadmium, Total (H)	EPA 200.8	mg/L	0.0053**	
Nickel, Total (H)	EPA 200.8	mg/l	1.02**	
Mercury, Total	EPA 245.1	mg/L	0.0014	
Selenium, Total	EPA 200.8	mg/L	0.005	
Silver, Total (H)	EPA 200.8	mg/L	0.0183**	
Biochemical Oxygen Demand (BOD)	SM 5210B	mg/L	30	

SM – Standard Methods for the Examination of Water and Wastewater, 18th edition

EPA – U.S. EPA test methods

(H) – Hardness dependent

* Minimum parameters required by this General Permit

**The NAL is the highest value used by U.S. EPA based on their hardness table in the 2008 MSGP.

from the NPDES General Permit for Storm Water Discharges Associated with Industrial Activities

General Order 2014-0057-DWQ



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Sandia National Laboratories

Accounts Payable MS1385 / PO Box 5800

Albuquerque NM, 87185

Project Manager: John Chavarria

Project: ST - Storm Water Samples

Project Number: ST-111617

Reported:

12/06/17 11:33

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
ST-11-111617 Station 11	17K1718-01	Water	11/16/17 07:45	11/16/17 23:28
ST-13-1-111617 Station 13-1	17K1718-02	Water	11/16/17 07:54	11/16/17 23:28
ST-20-1-111617 Station 20-1	17K1718-03	Water	11/16/17 08:08	11/16/17 23:28
ST-20-1-111617Q Station 20-1Q	17K1718-04	Water	11/16/17 08:08	11/16/17 23:28
ST-20-1-111617R Station 20-1R	17K1718-05	Water	11/16/17 08:08	11/16/17 23:28



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Albuquerque NM, 87185

Project Manager: John Chavarria
Project: ST - Storm Water Samples
Project Number: ST-111617

Reported:
12/06/17 11:33

ST-11-111617 Station 11
17K1718-01(Water)

Analyte	MDL	RL	NAL	Result	Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	Notes
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Metals by EPA 200 Series Methods

Iron	0.020	0.10	1.0	0.66	mg/L	1	AL72966	12/04/17 08:22	12/05/17 14:38	EPA 200.7	MAM	
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Metals by EPA Method 200.8 ICP/MS

Aluminum	0.020	0.050	0.75	0.47	mg/L	4	AL72914	12/01/17 11:40	12/05/17 00:41	EPA 200.8	MMY	
Lead	0.0024	0.0050	0.26	ND	mg/L	4	AL72914	12/01/17 11:40	12/05/17 00:41	EPA 200.8	MMY	U
Zinc	0.0080	0.050	0.26	0.080	mg/L	4	AL72914	12/01/17 11:40	12/05/17 00:41	EPA 200.8	MMY	

Conventional Chemistry Parameters by APHA/EPA Methods

Chemical Oxygen Demand	9.0	50	120	41	mg/L	1	AK74161	11/28/17 09:00	12/01/17 11:00	SM5220D	ZMH	J
Oil & Grease (HEM)	1.4	5.0	15	ND	mg/L	1	AK74258	11/30/17 07:56	11/30/17 14:03	EPA 1664A	STS	U
Total Suspended Solids	0.30	1.0	100	8.2	mg/L	1	AK74020	11/22/17 12:45	11/27/17 17:00	SM2540D	MLG	
Nitrate + Nitrite as N	0.040	0.20	0.68	0.12	mg/L	1	AK74172	11/28/17 10:00	11/29/17 16:00	SM4500-NO3 E	EV	J
Phosphorus, total	0.11	0.20	2.0	0.29	mg/L	1	AL73007	12/05/17 07:20	12/05/17 12:11	SM4500-P E	SMS	



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Albuquerque NM, 87185

Project Manager: John Chavarria
Project: ST - Storm Water Samples
Project Number: ST-111617

Reported:
12/06/17 11:33

ST-13-1-111617 Station 13-1
17K1718-02(Water)

Analyte	MDL	RL	NAL	Result	Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	Notes
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Metals by EPA 200 Series Methods

Iron	0.020	0.10	1.0	3.3	mg/L	1	AL72966	12/04/17 08:22	12/05/17 14:43	EPA 200.7	MAM	
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Metals by EPA Method 200.8 ICP/MS

Aluminum	0.020	0.050	0.75	2.5	mg/L	4	AL72914	12/01/17 11:40	12/05/17 00:48	EPA 200.8	MMY	
Lead	0.0024	0.0050	0.26	0.0080	mg/L	4	AL72914	12/01/17 11:40	12/05/17 00:48	EPA 200.8	MMY	
Zinc	0.0080	0.050	0.26	0.15	mg/L	4	AL72914	12/01/17 11:40	12/05/17 00:48	EPA 200.8	MMY	

Conventional Chemistry Parameters by APHA/EPA Methods

Chemical Oxygen Demand	9.0	50	120	110	mg/L	1	AK74161	11/28/17 09:00	12/01/17 11:00	SM5220D	ZMH	
Oil & Grease (HEM)	1.4	5.0	15	ND	mg/L	1	AK74258	11/30/17 07:56	11/30/17 14:03	EPA 1664A	STS	U
Total Suspended Solids	0.30	1.0	100	41	mg/L	1	AK74020	11/22/17 12:45	11/27/17 17:00	SM2540D	MLG	
Nitrate + Nitrite as N	0.080	0.40	0.68	0.84	mg/L	2	AK74172	11/28/17 10:00	11/29/17 16:00	SM4500-NO3 E	EV	
Phosphorus, total	0.11	0.40	2.0	0.53	mg/L	1	AL73007	12/05/17 07:20	12/05/17 12:11	SM4500-P E	SMS	



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Albuquerque NM, 87185

Project Manager: John Chavarria
Project: ST - Storm Water Samples
Project Number: ST-111617

Reported:
12/06/17 11:33

ST-20-1-111617 Station 20-1
17K1718-03(Water)

Analyte	MDL	RL	NAL	Result	Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	Notes
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Metals by EPA 200 Series Methods

Iron	0.020	0.10	1.0	0.46	mg/L	1	AL72966	12/04/17 08:22	12/05/17 14:47	EPA 200.7	MAM	
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Metals by EPA Method 200.8 ICP/MS

Aluminum	0.020	0.050	0.75	0.36	mg/L	4	AL72914	12/01/17 11:40	12/05/17 00:54	EPA 200.8	MMY	
Lead	0.0024	0.0050	0.26	ND	mg/L	4	AL72914	12/01/17 11:40	12/05/17 00:54	EPA 200.8	MMY	U
Zinc	0.0080	0.050	0.26	0.32	mg/L	4	AL72914	12/01/17 11:40	12/05/17 00:54	EPA 200.8	MMY	

Conventional Chemistry Parameters by APHA/EPA Methods

Chemical Oxygen Demand	9.0	50	120	110	mg/L	1	AK74161	11/28/17 09:00	12/01/17 11:00	SM5220D	ZMH	
Oil & Grease (HEM)	1.4	5.0	15	ND	mg/L	1	AK74258	11/30/17 07:56	11/30/17 14:03	EPA 1664A	STS	U
Total Suspended Solids	0.30	1.0	100	10	mg/L	1	AK74020	11/22/17 12:45	11/27/17 17:00	SM2540D	MLG	
Nitrate + Nitrite as N	0.040	0.20	0.68	0.24	mg/L	1	AK74172	11/28/17 10:00	11/29/17 16:00	SM4500-NO3 E	EV	
Phosphorus, total	0.011	0.040	2.0	0.11	mg/L	1	AL73007	12/05/17 07:20	12/05/17 12:11	SM4500-P E	SMS	



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Project Manager: John Chavarria
Project: ST - Storm Water Samples
Project Number: ST-111617

Reported:
12/06/17 11:33

ST-20-1-111617Q Station 20-1Q
17K1718-04(Water)

Analyte	MDL	RL	NAL	Result	Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	Notes
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Metals by EPA 200 Series Methods

Iron	0.020	0.10	1.0	0.45	mg/L	1	AL72966	12/04/17 08:22	12/05/17 12:17	EPA 200.7	MAM	
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Metals by EPA Method 200.8 ICP/MS

Aluminum	0.020	0.050	0.75	0.29	mg/L	4	AL72914	12/01/17 11:40	12/05/17 01:01	EPA 200.8	MMY	
Lead	0.0024	0.0050	0.26	ND	mg/L	4	AL72914	12/01/17 11:40	12/05/17 01:01	EPA 200.8	MMY	U
Zinc	0.0080	0.050	0.26	0.33	mg/L	4	AL72914	12/01/17 11:40	12/05/17 01:01	EPA 200.8	MMY	

Conventional Chemistry Parameters by APHA/EPA Methods

Chemical Oxygen Demand	9.0	50	120	26	mg/L	1	AK74161	11/28/17 09:00	12/01/17 11:00	SM5220D	ZMH	J
Oil & Grease (HEM)	1.4	5.0	15	ND	mg/L	1	AK74258	11/30/17 07:56	11/30/17 14:03	EPA 1664A	STS	U
Total Suspended Solids	0.30	1.0	100	8.3	mg/L	1	AK74020	11/22/17 12:45	11/27/17 17:00	SM2540D	MLG	
Nitrate + Nitrite as N	0.040	0.20	0.68	0.19	mg/L	1	AK74172	11/28/17 10:00	11/29/17 16:00	SM4500-NO3 E	EV	J
Phosphorus, total	0.011	0.040	2.0	0.10	mg/L	1	AL73007	12/05/17 07:20	12/05/17 12:11	SM4500-P E	SMS	



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Albuquerque NM, 87185

Project Manager: John Chavarria
Project: ST - Storm Water Samples
Project Number: ST-111617

Reported:
12/06/17 11:33

ST-20-1-111617R Station 20-1R
17K1718-05(Water)

Analyte	MDL	RL	NAL	Result	Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	Notes
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Metals by EPA 200 Series Methods

Iron	0.020	0.10	1.0	ND	mg/L	1	AL72966	12/04/17 08:22	12/05/17 14:52	EPA 200.7	MAM	U
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Metals by EPA Method 200.8 ICP/MS

Aluminum	0.020	0.050	0.75	ND	mg/L	4	AL72914	12/01/17 11:40	12/04/17 20:47	EPA 200.8	MMY	U
Lead	0.0024	0.0050	0.26	ND	mg/L	4	AL72914	12/01/17 11:40	12/04/17 20:47	EPA 200.8	MMY	U
Zinc	0.0080	0.050	0.26	ND	mg/L	4	AL72914	12/01/17 11:40	12/04/17 20:47	EPA 200.8	MMY	U

Conventional Chemistry Parameters by APHA/EPA Methods

Chemical Oxygen Demand	9.0	50	120	ND	mg/L	1	AK74161	11/28/17 09:00	12/01/17 11:00	SM5220D	ZMH	U
Oil & Grease (HEM)	1.4	5.0	15	ND	mg/L	1	AK74258	11/30/17 07:56	11/30/17 14:03	EPA 1664A	STS	U
Total Suspended Solids	0.30	1.0	100	ND	mg/L	1	AK74020	11/22/17 12:45	11/27/17 17:00	SM2540D	MLG	U
Nitrate + Nitrite as N	0.040	0.20	0.68	0.18	mg/L	1	AK74172	11/28/17 10:00	11/29/17 16:00	SM4500-NO3 E	EV	J
Phosphorus, total	0.011	0.040	2.0	0.011	mg/L	1	AL73007	12/05/17 07:20	12/05/17 12:11	SM4500-P E	SMS	J



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Sandia National Laboratories

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Albuquerque NM, 87185

Project Manager: John Chavarria

Project: ST - Storm Water Samples

Project Number: ST-111617

Reported:

12/06/17 11:33

Metals by EPA 200 Series Methods - Quality Control

Alpha Analytical Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch AL72966 - Metals Digest										
Blank (AL72966-BLK1)					Prepared: 12/04/17 Analyzed: 12/05/17					
Iron	ND	0.020	0.10	mg/L						U
LCS (AL72966-BS1)					Prepared: 12/04/17 Analyzed: 12/05/17					
Iron	1.98	0.020	0.10	mg/L	2.00		98.9	85-115		
Duplicate (AL72966-DUP1)					Source: 17K1718-04 Prepared: 12/04/17 Analyzed: 12/05/17					
Iron	0.485	0.020	0.10	mg/L		0.449		7.64	20	
Matrix Spike (AL72966-MS1)					Source: 17K1718-04 Prepared: 12/04/17 Analyzed: 12/05/17					
Iron	2.38	0.020	0.10	mg/L	2.00	0.449	96.3	70-130		
Matrix Spike (AL72966-MS2)					Source: 17K1684-01 Prepared: 12/04/17 Analyzed: 12/05/17					
Iron	1.97	0.020	0.10	mg/L	2.00	0.0688	95.2	70-130		
Matrix Spike Dup (AL72966-MSD1)					Source: 17K1718-04 Prepared: 12/04/17 Analyzed: 12/05/17					
Iron	2.41	0.020	0.10	mg/L	2.00	0.449	98.0	70-130	1.35	20



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Albuquerque NM, 87185

Project Manager: John Chavarria

Project: ST - Storm Water Samples

Project Number: ST-111617

Reported:

12/06/17 11:33

Metals by EPA Method 200.8 ICP/MS - Quality Control

Alpha Analytical Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch AL72914 - EPA 200.8											
Blank (AL72914-BLK1)											
						Prepared: 12/01/17 Analyzed: 12/04/17					
Aluminum	ND	0.0050	0.050	mg/L							U
Zinc	ND	0.0020	0.050	mg/L							U
Lead	ND	0.00060	0.0050	mg/L							U
LCS (AL72914-BS1)											
						Prepared: 12/01/17 Analyzed: 12/04/17					
Lead	0.0215	0.00060	0.0050	mg/L	0.0200		108	85-115			
Aluminum	0.549	0.0050	0.050	mg/L	0.520		106	85-115			
Zinc	0.100	0.0020	0.050	mg/L	0.100		100	85-115			
Duplicate (AL72914-DUP1)											
				Source: 17K1718-05		Prepared: 12/01/17 Analyzed: 12/04/17					
Aluminum	ND	0.020	0.050	mg/L		ND			20		U
Lead	ND	0.0024	0.0050	mg/L		ND			20		U
Zinc	ND	0.0080	0.050	mg/L		ND			20		U
Matrix Spike (AL72914-MS1)											
				Source: 17K1718-05		Prepared: 12/01/17 Analyzed: 12/04/17					
Lead	0.0211	0.0024	0.0050	mg/L	0.0200	ND	106	70-130			
Aluminum	0.553	0.020	0.050	mg/L	0.520	ND	106	70-130			
Zinc	0.0979	0.0080	0.050	mg/L	0.100	ND	97.9	70-130			
Matrix Spike (AL72914-MS2)											
				Source: 17K1687-01		Prepared: 12/01/17 Analyzed: 12/04/17					
Zinc	0.108	0.0080	0.050	mg/L	0.100	ND	108	70-130			
Aluminum	0.816	0.020	0.050	mg/L	0.520	0.204	118	70-130			
Lead	0.0226	0.0024	0.0050	mg/L	0.0200	ND	113	70-130			
Matrix Spike Dup (AL72914-MSD1)											
				Source: 17K1718-05		Prepared: 12/01/17 Analyzed: 12/04/17					
Lead	0.0213	0.0024	0.0050	mg/L	0.0200	ND	106	70-130	0.902	20	
Zinc	0.0974	0.0080	0.050	mg/L	0.100	ND	97.4	70-130	0.592	20	
Aluminum	0.558	0.020	0.050	mg/L	0.520	ND	107	70-130	1.03	20	

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Sandia National Laboratories

Accounts Payable MS1385 / PO Box 5800

Albuquerque NM, 87185

Project Manager: John Chavarria

Project: ST - Storm Water Samples

Project Number: ST-111617

Reported:

12/06/17 11:33

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Alpha Analytical Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch AK74020 - General Preparation											
Blank (AK74020-BLK1)						Prepared: 11/22/17 Analyzed: 11/27/17					
Total Suspended Solids	ND	0.30	1.0	mg/L							U
Duplicate (AK74020-DUP1)						Source: 17K1709-01 Prepared: 11/22/17 Analyzed: 11/27/17					
Total Suspended Solids	106	0.30	1.0	mg/L		110			4.23	30	
Duplicate (AK74020-DUP2)						Source: 17K1722-07 Prepared: 11/22/17 Analyzed: 11/27/17					
Total Suspended Solids	224	0.30	1.0	mg/L		221			1.18	30	
Batch AK74161 - General Preparation											
Blank (AK74161-BLK1)						Prepared: 11/28/17 Analyzed: 12/01/17					
Chemical Oxygen Demand	ND	9.0	50	mg/L							U
LCS (AK74161-BS1)						Prepared: 11/28/17 Analyzed: 12/01/17					
Chemical Oxygen Demand	415	9.0	50	mg/L	400		104	85-115			
LCS Dup (AK74161-BSD1)						Prepared: 11/28/17 Analyzed: 12/01/17					
Chemical Oxygen Demand	408	9.0	50	mg/L	400		102	85-115	1.70	20	
Duplicate (AK74161-DUP1)						Source: 17K1718-01 Prepared: 11/28/17 Analyzed: 12/01/17					
Chemical Oxygen Demand	45.4	9.0	50	mg/L		41.0			10.2	20	J
Matrix Spike (AK74161-MS1)						Source: 17K1718-01 Prepared: 11/28/17 Analyzed: 12/01/17					
Chemical Oxygen Demand	459	9.0	50	mg/L	400	41.0	104	85-115			
Matrix Spike Dup (AK74161-MSD1)						Source: 17K1718-01 Prepared: 11/28/17 Analyzed: 12/01/17					
Chemical Oxygen Demand	454	9.0	50	mg/L	400	41.0	103	85-115	1.07	20	

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Sandia National Laboratories

Accounts Payable MS1385 / PO Box 5800

Albuquerque NM, 87185

Project Manager: John Chavarria

Project: ST - Storm Water Samples

Project Number: ST-111617

Reported:

12/06/17 11:33

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Alpha Analytical Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch AK74172 - General Preparation											
Blank (AK74172-BLK1)						Prepared: 11/28/17 Analyzed: 11/29/17					
Nitrate + Nitrite as N	ND	0.040	0.20	mg/L							U
LCS (AK74172-BS1)						Prepared: 11/28/17 Analyzed: 11/29/17					
Nitrate + Nitrite as N	0.386	0.040	0.20	mg/L	0.400		96.5	85-115			
LCS Dup (AK74172-BSD1)						Prepared: 11/28/17 Analyzed: 11/29/17					
Nitrate + Nitrite as N	0.381	0.040	0.20	mg/L	0.400		95.4	85-115	1.19	15	
Duplicate (AK74172-DUP1)						Source: 17K1704-02 Prepared: 11/28/17 Analyzed: 11/29/17					
Nitrate + Nitrite as N	ND	0.040	0.20	mg/L		ND				15	U
Matrix Spike (AK74172-MS1)						Source: 17K1704-02 Prepared: 11/28/17 Analyzed: 11/29/17					
Nitrate + Nitrite as N	0.351	0.040	0.20	mg/L	0.400	ND	87.8	80-120			
Matrix Spike Dup (AK74172-MSD1)						Source: 17K1704-02 Prepared: 11/28/17 Analyzed: 11/29/17					
Nitrate + Nitrite as N	0.346	0.040	0.20	mg/L	0.400	ND	86.6	80-120	1.31	15	
Batch AK74258 - General Preparation											
Blank (AK74258-BLK1)						Prepared & Analyzed: 11/30/17					
Oil & Grease (HEM)	ND	1.4	5.0	mg/L							U
LCS (AK74258-BS1)						Prepared & Analyzed: 11/30/17					
Oil & Grease (HEM)	39.5	1.4	5.0	mg/L	40.0		98.8	78-114			
LCS Dup (AK74258-BSD1)						Prepared & Analyzed: 11/30/17					
Oil & Grease (HEM)	39.7	1.4	5.0	mg/L	40.0		99.2	78-114	0.505	18	

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Sandia National Laboratories

Accounts Payable MS1385 / PO Box 5800

Albuquerque NM, 87185

Project Manager: John Chavarria

Project: ST - Storm Water Samples

Project Number: ST-111617

Reported:

12/06/17 11:33

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Alpha Analytical Laboratories, Inc.

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch AK74258 - General Preparation											
Matrix Spike (AK74258-MS1)		Source: 17K1697-02			Prepared & Analyzed: 11/30/17						
Oil & Grease (HEM)	36.8	1.4	5.0	mg/L	40.0	ND	92.0	78-114			
Batch AL73007 - General Prep											
Blank (AL73007-BLK1)		Prepared & Analyzed: 12/05/17									
Phosphorus, total	ND	0.011	0.040	mg/L							U
LCS (AL73007-BS1)		Prepared & Analyzed: 12/05/17									
Phosphorus, total	0.198	0.011	0.040	mg/L	0.200		99.2	85-115			
Duplicate (AL73007-DUP1)		Source: 17K2374-03			Prepared & Analyzed: 12/05/17						
Phosphorus, total	0.0200	0.011	0.040	mg/L		0.0187			6.81	20	J
Matrix Spike (AL73007-MS1)		Source: 17K2374-03			Prepared & Analyzed: 12/05/17						
Phosphorus, total	0.204	0.011	0.040	mg/L	0.200	0.0187	92.5	70-130			
Matrix Spike (AL73007-MS2)		Source: 17K1718-05			Prepared & Analyzed: 12/05/17						
Phosphorus, total	0.171	0.011	0.040	mg/L	0.200	ND	85.3	70-130			
Matrix Spike Dup (AL73007-MSD1)		Source: 17K2374-03			Prepared & Analyzed: 12/05/17						
Phosphorus, total	0.202	0.011	0.040	mg/L	0.200	0.0187	91.8	70-130	0.650	20	

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Project Manager: John Chavarria

Project: ST - Storm Water Samples

Project Number: ST-111617

Reported:

12/06/17 11:33

Notes and Definitions

J	Detected but below the Reporting Limit; therefore, result is an estimated concentration, detected but not quantified (DNQ).
U	Analyte included in analysis, but not detected at or above MDL.
*	No annual NAL for pH. Instantaneous Maximum NAL <6.0 or >9.0
MDL	Method Detection Limit
NA	NAL not available
NAL	Annual Numeric Action Level
ND	Analyte NOT DETECTED at or above the detection limit
RL	Reporting Limit
RPD	Relative Percent Difference

CHAIN OF CUSTODY RECORD AND ANALYTIC INSTRUCTIONS

3.20 17K1718
1045

Sample ID	Location	S. Time	S. Date	Sample Mat'l	Analyze For	Method	# of Cont	Initials	Preservatives / Comments
ST-11-111617	Station 11	0745	11/16/17	Stormwater	Oil & Grease	EPA1664A	1 x 1L (Glass)		Preserved w/ H ₂ SO ₄ (GRAB)
ST-11-111617	"	"	"	"	TSS	SM2540D	1 x 1L		NONE (GRAB)
ST-11-111617	"	"	"	"	Zn, Fe, Al & Pb	200.7/ 200.8	1 x 500ml		Preserved w/ HNO ₃ (GRAB)
ST-11-111617	"	"	"	"	Nitrate+Nitrite as N	SM4500-NO3-E	1 x 1L		NONE (GRAB)
ST-11-111617	"	"	"	"	COD	SM5220D	1 x 500ml		Preserved w/ H ₂ SO ₄ (GRAB)
ST-11-111617	"	"	"	"	Total P	SM4500P	1x 250ml		Preserved with H ₂ SO ₄ (Grab)

Alpha Analytical Laboratories, Inc. WILL BE REQUIRED TO INFORM SANDIA NATIONAL LABS CA. IF IT APPEARS THAT THE ANALYTICAL DATA IS OF LIMITED USE DUE TO THEIR LABORATORY PROCEDURES AND HANDLING OR IF THE QA DATA DOES NOT MEET EPA STANDARDS.

Project Name or ID No: <u>ST-111617</u>	PO# <u>1347244</u>	Sample Released By: <u>[Signature]</u>
Sampler(s) Signature: <u>[Signature]</u>	Date/Time Sample Released: <u>11/16/17 @ 1815</u>	Courier Sample Received By: <u>[Signature]</u>
Sandia Contact Name: <u>John Chavarria</u>	Date/Time Received: <u>11-16-17 1201:18</u>	Courier Sample Released By: <u>[Signature]</u>
Sandia Phone Number: <u>(925) 294-3473 / FAX(925) 294-2230</u>	Date/Time Sample Released: <u>11-16-17 23:28</u>	Received by Lab Personnel: <u>[Signature]</u>
Sample Released By: <u>[Signature]</u>	Date/Time Received: <u>11-16-17 1228:28</u>	
Date/Time Sample Released: <u>11/16/17 1050</u>		
Sample Received By: <u>[Signature]</u>		
Date/Time Sample Received: <u>11/16/17 @ 1325</u>		
Laboratory Name, Address, Phone: <u>Alpha Analytical Laboratories, Inc.</u> <u>6398 Dougherty Road Suite 35</u> <u>Dublin, CA 94568 Phone (925) 828-6226 Fax (925) 828-6309</u>	1. Specify analytical method used and detection limits 2. Specify date 3. Notify Sandia of anomalies or problems 4. Provide QA/QC data along with the results 5. Tamper resistant seals are in place (yes/no)	

Please sign and return this form to: Sandia National Laboratories, Environmental Management Department, MS 9902
P.O Box 969, Livermore, Ca. 94551-0969

3.20

17K1718

CHAIN OF CUSTODY RECORD AND ANALYTIC INSTRUCTIONS

2 of 5

Sample ID	Location	S. Time	S. Date	Sample Mat'l	Analyze For	Method	# of Cont	Initials	Comments
ST-13-1-111617	Station 13-1	0754	11/16/17	Stormwater	Oil & Grease	EPA1664A	1 x 1L (Glass)		Preserved w/ H ₂ SO ₄ (GRAB)
ST-13-1-111617	"	"	"	"	TSS	SM2540D	1 x 1L		NONE (GRAB)
ST-13-1-111617	"	"	"	"	Zn, Fe, Al & Pb	200.7/ 200.8	1 x 500mL		Preserved w/ HNO ₃ (GRAB)
ST-13-1-111617	"	"	"	"	Nitrate+Nitrite as N	SM4500-NO3-E	1 x 1L		NONE (GRAB)
ST-13-1-111617	"	"	"	"	COD	SM5220D	1 x 500mL		Preserved w/ H ₂ SO ₄ (GRAB)
ST-13-1-111617	"	"	"	"	Total P	SM4500P	1x 250ml		Preserved w/ H ₂ SO ₄ (GRAB)

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Project Name or ID No: ST-111617 **PO#1347244**

Sampler(s) Signature: [Signature]

Sandia Contact Name: John Chavarria

Sandia Phone Number: (925) 294-3473 / FAX (925) 294-2230

Sample Released By: [Signature]

Date/Time Sample Released: 11/16/17 1050

Sample Received By: [Signature]

Date/Time Sample Received: 11/16/17 @ 1325

Sample Released By: [Signature]

Date/Time Sample Released: 11/16/17 @ 1815

Courier Sample Received By: [Signature]

Date/Time Received: 11-16-17 20:18

Courier Sample Released By: [Signature]

Date/Time Sample Released: 11-16-17 23:28

Received by Lab Personnel: [Signature]

Date/Time Received: 11-16-17 23:28

Laboratory Name, Address, Phone:

Alpha Analytical Laboratories, Inc.

6398 Dougherty Road Suite 35

Dublin, CA 94568 Phone (925) 828-6226 Fax (925) 828-6309

1. Specify analytical method used and detection limits
2. Specify date
3. Notify Sandia of anomalies or problems
4. Provide QA/QC data along with the results
5. Tamper resistant seals are in place (yes/no)

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3.2° 17K1718
3045

CHAIN OF CUSTODY RECORD AND ANALYTIC INSTRUCTIONS

Sample ID	Location	S. Time	S. Date	Sample Mat'l	Analyze For	Method	# of Cont	Initials	Comments
ST-20-1-111617	Station 20-1	0808	11/16/17	Stormwater	Oil & Grease	EPA1664A	1 x 1L (Glass)		Preserved w/ H ₂ SO ₄ (GRAB)
ST-20-1-111617	"	"	"	"	TSS	SM2540D	1 x 1L		NONE (GRAB)
ST-20-1-111617	"	"	"	"	Zn, Fe, Al & Pb	200.7/ 200.8	1 x 500mL		Preserved w/ HNO ₃ (GRAB)
ST-20-1-111617	"	"	"	"	Nitrate+Nitrite as N	SM4500-NO3-E	1 x 1L		NONE (GRAB)
ST-20-1-111617	"	"	"	"	COD	SM5220D	1 x 500mL		Preserved w/ H ₂ SO ₄ (GRAB)
ST-20-1-111617	"	"	"	"	Total P	SM4500P	1x 250ml		Preserved w/ H ₂ SO ₄ (GRAB)

Alpha Analytical Laboratories, Inc. WILL BE REQUIRED TO INFORM SANDIA NATIONAL LABS CA. IF IT APPEARS THAT THE ANALYTICAL DATA IS OF LIMITED USE DUE TO THEIR LABORATORY PROCEDURES AND HANDLING OR IF THE QA DATA DOES NOT MEET EPA STANDARDS.

Project Name or ID No: ST-111617 PO#1347244
 Sampler(s) Signature: [Signature]
 Sandia Contact Name: John Chavarria
 Sandia Phone Number: (925) 294-3473 / FAX (925) 294-2230
 Sample Released By: [Signature]
 Date/Time Sample Released: 11/16/17 1050
 Sample Received By: [Signature]
 Date/Time Sample Received: 11/16/17 @ 1325

Sample Released By: [Signature]
 Date/Time Sample Released: 11/16/17 @ 1815
 Courier Sample Received By: [Signature]
 Date/Time Received: 11-16-17 1 20:18
 Courier Sample Released By: [Signature]
 Date/Time Sample Released: 11-16-17 @ 23:28
 Received by Lab Personnel: [Signature]
 Date/Time Received: 11-16-17 1 23:28

Laboratory Name, Address, Phone:
Alpha Analytical Laboratories, Inc.
6398 Dougherty Road Suite 35
Dublin, CA 94568 Phone (925) 828-6226 Fax (925) 828-6309

1. Specify analytical method used and detection limits
2. Specify date
3. Notify Sandia of anomalies or problems
4. Provide QA/QC data along with the results
5. Tamper resistant seals are in place (yes/no)

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CHAIN OF CUSTODY RECORD AND ANALYTIC INSTRUCTIONS

3.20 17K1718
4045

Sample ID	Location	S. Time	S. Date	Sample Mat'l	Analyze For	Method	# of Cont	Initials	Comments
ST-20-1-111617Q	Station 20-1Q	0808	11/16/17	Stormwater	Oil & Grease	EPA1664A	1 x 1L (Glass)		Preserved w/ H ₂ SO ₄ (GRAB)
ST-20-1-111617Q	"	"	"	"	TSS	SM2540D	1 x 1L		NONE (GRAB)
ST-20-1-111617Q	"	"	"	"	Zn, Fe, Al & Pb	200.7/ 200.8	1 x 500mL		Preserved w/ HNO ₃ (GRAB)
ST-20-1-111617Q	"	"	"	"	Nitrate+Nitrite as N	SM4500-NO3-E	1 x 1L		NONE (GRAB)
ST-20-1-111617Q	"	"	"	"	COD	SM5220D	1 x 500mL		Preserved w/ H ₂ SO ₄ (GRAB)
ST-20-1-111617Q	"	"	"	"	Total P	SM4500P	1x 250ml		Preserved w/ H ₂ SO ₄ (GRAB)

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Project Name or ID No: ST-111617 PO#1347244 Sample Released By:
 Sampler(s) Signature: Date/Time Sample Released: 11/16/17 @ 1815
 Sandia Contact Name: John Chavarria Courier Sample Received By: PZ
 Sandia Phone Number: (925) 294-3473 / FAX (925) 294-2230 Date/Time Received: 11-16-17 1 20:18
 Sample Released By: Courier Sample Released By: PZ
 Date/Time Sample Released: 11/16/17 1050 Date/Time Sample Released: 11-16-17 @ 23:28
 Sample Received By: Received by Lab Personnel: PZ
 Date/Time Sample Received: 11/16/17 @ 1325 Date/Time Received: 11-16-17 1 @ 23:28

Laboratory Name, Address, Phone:
Alpha Analytical Laboratories, Inc.
6398 Dougherty Road Suite 35
Dublin, CA 94568 Phone (925) 828-6226 Fax (925) 828-6309

1. Specify analytical method used and detection limits
2. Specify date
3. Notify Sandia of anomalies or problems
4. Provide QA/QC data along with the results
5. Tamper resistant seals are in place (yes/no)

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3.20 17K1718
5045

CHAIN OF CUSTODY RECORD AND ANALYTIC INSTRUCTIONS

Sample ID	Location	S. Time	S. Date	Sample Mat'l	Analyze For	Method	# of Cont	Initials	Comments
ST-20-1-111617R	Station 20-1R	0808	11/16/17	Stormwater	Oil & Grease	EPA1664A	1 x 1L (Glass)	✓	Preserved w/ H ₂ SO ₄ (GRAB)
ST-20-1-111617R	"	"	"	"	TSS	SM2540D	1 x 1L		NONE (GRAB)
ST-20-1-111617R	"	"	"	"	Zn, Fe, Al & Pb	200.7/ 200.8	1 x 500mL		Preserved w/ HNO ₃ (GRAB)
ST-20-1-111617R	"	"	"	"	Nitrate+Nitrite as N	SM4500-NO3-E	1 x 1L		NONE (GRAB)
ST-20-1-111617R	"	"	"	"	COD	SM5220D	1 x 500mL		Preserved w/ H ₂ SO ₄ (GRAB)
ST-20-1-111617R	"	"	"	"	Total P	SM4500P	1x 250ml		Preserved w/ H ₂ SO ₄ (GRAB)

Alpha Analytical Laboratories, Inc. WILL BE REQUIRED TO INFORM SANDIA NATIONAL LABS CA. IF IT APPEARS THAT THE ANALYTICAL DATA IS OF LIMITED USE DUE TO THEIR LABORATORY PROCEDURES AND HANDLING OR IF THE QA DATA DOES NOT MEET EPA STANDARDS.

Project Name or ID No: ST-111617

PO#1347244

Sample Released By: [Signature]

Sampler(s) Signature: [Signature]

Date/Time Sample Released: 11/16/17 @ 1815

Sandia Contact Name: John Chavarria

Courier Sample Received By: PZ

Sandia Phone Number: (925) 294-3473 / FAX (925) 294-2230

Date/Time Received: 11-16-17 18:18

Sample Released By: [Signature]

Courier Sample Released By: PZ

Date/Time Sample Released: 11/16/17 1650

Date/Time Sample Released: 11-16-17 23:28

Sample Received By: [Signature]

Received by Lab Personnel: PZ

Date/Time Sample Received: 11/16/17 @ 1325

Date/Time Received: 11-16-17 23:28

Laboratory Name, Address, Phone:

Alpha Analytical Laboratories, Inc.

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Dublin, CA 94568 Phone (925) 828-6226 Fax (925) 828-6309

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